

Having thus defined the invention, We claim:

1. A floating liner adapted for use with a container of welding wire, said floating liner comprising a tube having a first and second end and a passageway extending between the two ends, said first end adapted to receive the welding wire, said passageway designed to receive the welding wire, said tube having a weight profile that causes said first end to at least partially float at least closely adjacent to a top surface of a layer of welding wire or retainer ring in the container for at least a portion of a time the welding wire is paid out of the container.  
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2. The floating liner as defined in claim 1, wherein said weight profile of said tube is about equal to an upward force applied to said tube as the welding wire being paid out of the container passes into and through said passageway of said tube.
3. The floating liner as defined in claim 1, wherein said weight distribution of said tube includes the greatest weight at least closely adjacent to said first end of said tube.
4. The floating liner as defined in claim 2, wherein said weight distribution of said tube includes the greatest weight at least closely adjacent to said first end of said tube.
5. The floating liner as defined in claim 1, wherein said weight distribution of said tube is adjustable.
6. The floating liner as defined in claim 4, wherein said weight distribution of said tube is adjustable.
7. The floating liner as defined in claim 5, wherein said weight distribution of said tube is adjustable.
8. The floating liner as defined in claim 5, wherein said weight distribution of said tube

is at least partially formed by a removable weight.

9. The floating liner as defined in claim 1, wherein said tube is at least partially flexible.

10. The floating liner as defined in claim 4, wherein said tube is at least partially flexible.

11. The floating liner as defined in claim 1, wherein said tube includes a sleeve secured to said first end, said sleeve including a beveled opening to at least partially guide the welding wire into said passageway of said tube.

12. The floating liner as defined in claim 10, wherein said tube includes a sleeve secured to said first end, said sleeve including a beveled opening to at least partially guide the welding wire into said passageway of said tube.

13. The floating liner as defined in claim 6, wherein said tube includes a sleeve secured to said first end, said sleeve including a beveled opening to at least partially guide the welding wire into said passageway of said tube.

14. The floating liner as defined in claim 11, wherein said beveled opening at least partially includes a low friction surface.

15. The floating liner as defined in claim 1, wherein said passageway of said tube at least partially includes a low friction surface.

16. The floating liner as defined in claim 15, wherein said low friction surface is at least partially formed from a coating of a low friction material on at least a portion of a surface of said passageway.

17. The floating liner as defined in claim 1, wherein said tube includes at least two sections that are telescopically connected together.

18. The floating liner as defined in claim 2, wherein said tube includes at least two sections that are telescopically connected together.

19. The floating liner as defined in claim 3, wherein said tube includes at least two sections that are telescopically connected together.

20. The floating liner as defined in claim 9, wherein said tube includes at least two sections that are telescopically connected together.

21. The floating liner as defined in claim 12, wherein said tube includes at least two sections that are telescopically connected together.

22. The floating liner as defined in claim 13, wherein said tube includes at least two sections that are telescopically connected together.

23. The floating liner as defined in claim 1, wherein said passageway of said tube has an inner diameter that is at least twice the diameter of the wire passing through the passageway.

24. The floating liner as defined in claim 2, wherein said passageway of said tube has an inner diameter that is at least twice the diameter of the wire passing through the passageway..

25. The floating liner as defined in claim 3, wherein said passageway of said tube has an inner diameter that is at least twice the diameter of the wire passing through the passageway..

26. The floating liner as defined in claim 5, wherein said passageway of said tube has an

inner diameter that is at least twice the diameter of the wire passing through the passageway.

27. The floating liner as defined in claim 1, wherein a lower portion of said tube that includes said first end has a generally helical shape.

28. The floating liner as defined in claim 26, wherein a lower portion of said tube that includes said first end has a generally helical shape.

29. A container of welding wire, said container comprising an outer wall having a generally uniform cross-sectional shape, a lower partition and an upper opening and adapted to contain and allow controlled payout of a multitude of convolutions of welding wire formed into layers defining a generally cylindrical wire stack, said container further including a floating liner to at least partially guide said welding wire as said welding wire travels toward said upper opening of said container, said floating liner including a tube having a first and second end and a passageway extending between the two ends, at least one end of said tube unconnected from said container, said tube having a weight profile that causes said first end to at least partially float at least closely adjacent to a top surface of said layers of welding wire at least a portion of a time the welding wire is paid out of said container.

30. The container as defined in claim 29, wherein said weight distribution of said tube creates a downward force that is about equal to an upward force applied to said tube as said welding wire being paid out of said container passes into and through said passageway of said tube.

31. The container as defined in claim 29, wherein said weight distribution of said tube includes the greatest weight at least closely adjacent to said first end of said tube.

32. The container as defined in claim 30, wherein said weight distribution of said tube includes the greatest weight at least closely adjacent to said first end of said tube.

33. The container as defined in claim 29, wherein said weight distribution of said tube is adjustable.

34. The container as defined in claim 33, wherein said weight distribution of said tube is at least partially formed by a removable weight.

35. The container as defined in claim 29, wherein said tube is at least partially flexible.

36. The container as defined in claim 32, wherein said tube is at least partially flexible.

37. The container as defined in claim 29, wherein said tube includes a sleeve secured to said first end, said sleeve including a beveled opening to at least partially guide said welding wire into said passageway of said tube.

38. The container as defined in claim 36, wherein said tube includes a sleeve secured to said first end, said sleeve including a beveled opening to at least partially guide said welding wire into said passageway of said tube.

39. The container as defined in claim 37, wherein said beveled opening at least partially includes a low friction surface.

40. The container as defined in claim 29, wherein said passageway of said tube at least partially includes a low friction surface.

41. The container as defined in claim 40, wherein said low friction surface is at least partially formed from a coating of a low friction material on at least a portion of a surface of said passageway.

42. The container as defined in claim 29, wherein said tube includes at least two sections that are telescopically connected together.

43. The container as defined in claim 32, wherein said tube includes at least two sections that are telescopically connected together.

44. The container as defined in claim 38, wherein said tube includes at least two sections that are telescopically connected together.

45. The container as defined in claim 42, wherein said second end of said tube includes a substantially rigid portion that is oriented substantially parallel to a longitudinal axis of said container.

46. The container as defined in claim 42, wherein said second end of said tube includes a plurality of substantially rigid sections that are connected to one another and wherein at least one section at least partially telescopically receives another section.

47. The container as defined in claim 43, wherein said second end of said tube includes a plurality of substantially rigid sections that are connected to one another and wherein at least one section at least partially telescopically receives another section.

48. The container as defined in claim 44, wherein said second end of said tube includes a plurality of substantially rigid sections that are connected to one another and wherein at least one section at least partially telescopically receives another section.

49. The container as defined in claim 29, wherein a lower portion of said tube that includes said first end has a generally helical shape.

50. The container as defined in claim 47, wherein a lower portion of said tube that includes said first end has a generally helical shape.

51. The container as defined in claim 29, wherein said cross-sectional shape of said container is substantially circular.

52. The container as defined in claim 50, wherein said cross-sectional shape of said container is substantially circular.

53. The container as defined in claim 29, including a retainer ring positioned on said top surface of said layers of welding wire, said first end to at least partially floating at least closely adjacent to a top surface of said retaining ring.

54. The container as defined in claim 30, including a retainer ring positioned on said top surface of said layers of welding wire, said first end to at least partially floating at least closely adjacent to a top surface of said retaining ring.

55. The container as defined in claim 47, including a retainer ring positioned on said top surface of said layers of welding wire, said first end to at least partially floating at least closely adjacent to a top surface of said retaining ring.

56. The container as defined in claim 52, including a retainer ring positioned on said top surface of said layers of welding wire, said first end to at least partially floating at least closely adjacent to a top surface of said retaining ring.

57. The container as defined in claim 29, wherein said passageway of said tube has an inner diameter that is at least twice the diameter of the wire passing through the passageway.

58. The container as defined in claim 30, wherein said passageway of said tube has an inner diameter that is at least twice the diameter of the wire passing through the passageway.

59. The container as defined in claim 31, wherein said passageway of said tube has an inner diameter that is at least twice the diameter of the wire passing through the passageway.

60. The container as defined in claim 33, wherein said passageway of said tube has an inner diameter that is at least twice the diameter of the wire passing through the passageway.

61. The container as defined in claim 29, wherein said tube is at least partially formed of a material selected from the group consisting of a plastic polymer, nylon, Teflon, spring shaped steel, and combinations thereof.

62. A method of controlling the dispensing of wire from a container to reduce incidence of tangling of the welding wire and the formation of e-scripts in the welding wire as the welding wire is paid out from the container comprising:

5 providing a container having an outer wall having a generally uniform cross-sectional shape, a lower partition and an upper opening, and adapted to contain and allow controlled payout of welding wire;

providing a stack of welding wire in said container, said stack of welding wire having multitude of convolutions of welding wire formed into layers defining a generally cylindrical stack of welding wire; and,

10 providing a floating liner to at least partially guide said welding wire as said welding wire is paid out of said container, said floating liner including a tube having a first and second end and a passageway extending between the two ends, at least one end of said tube being unconnected from said container, said tube having a weight profile that causes said first end to at least partially float at least closely adjacent to a top surface of said layers of welding wire at least a portion of a time the welding wire is paid out of said container.

63. The method as defined in claim 62, including the step of positioning a retainer ring on said top surface of said layers of welding wire, said first end to at least partially floating above a top surface of said retaining ring.